CAPS Survey Report

Year:	2019
State:	Kansas
Cooperative Agreement Name:	Small Grains Commodity Survey
Cooperative Agreement Number:	USDA-APHIS-10025-PPQFO000-19-0184
Project Funding Period:	January 1, 2019 – December 31, 2019
Project Report:	CAPS Survey Report
Project Document Date:	January 1, 2019 – December 31, 2019
Cooperators Project Coordinator:	Laurinda Ramonda
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Quarterly Report	☐
Semi-Annual Accomplishment Report	☐
Annual Accomplishment Report	☒

A. Write a brief narrative of work accomplished. Compare actual accomplishments to objectives established as indicated in the work plan. When the output can be quantified, a computation of cost per unit is required when useful.

Participants: Laurinda Ramonda – provide training, supervision and shipping of samples to lab
Taro Eldredge, state entomologist – provide training, supervision and specimen sorting
Brian Brunkow - trapping and survey work

- March 25, 2019 – Brian Brunkow started survey work
- April 18, 2019 – All traps for wheat distributed
- April 22, 2019 – Sweep net survey began
- May 13, 2019 – EZ Grant application approved by USDA
- May 28, 2019 – Agreement signed
- June 10, 2019 – Specimens sent to Washington State Department of Agriculture for identification. 28 traps with a total 80 specimens of sent for Egyptian cottonworm and 96 traps with a total of 281 specimens for old world bollworm.
- June 17, 2019 – Trap removal began for Old World Bollworm and Small Brown Planthopper in wheat.
- June 26, 2019 – Results from specimens sent on June 10, 2019 were all negative for targets.
- July 1, 2019 – Specimens sent to Washington State Department of Agriculture for identification. 33 traps with a total 52 specimens of sent for Egyptian cottonworm and 43 traps with a total of 3,286 specimens for old world bollworm.
- July 11, 2019 – All traps removed for Old World Bollworm and Small Brown Planthopper in wheat. All sweep netting completed for Sunn Pest in wheat.
- July 16, 2019 – Traps for sorghum began to be set and sweep netting for Sunn pest in sorghum began.
- July 17, 2019 – Specimens sent to Washington State Department of Agriculture for identification. 38 traps with a total 273 specimens of sent for Egyptian cottonworm and 76 traps with a total of 12,031 specimens for old world bollworm.
- July 23, 2019 – All traps set for sorghum.
- July 23, 2019 – Results from specimens sent on July 1, 2019 were all negative for targets.
- August 1, 2019 – Specimens sent to Washington State Department of Agriculture for identification. 48 traps with a total 308 specimens of sent for Egyptian cottonworm and 88 traps with a total of 14,061 specimens for old world bollworm
- September 3, 2019 – All traps removed for Egyptian cottonworm in wheat.
- September 30, 2019 – Results from specimens sent on July 17 and August 1, 2019 were negative for targets.
- October 10, 2019 – All traps removed for sorghum.
- November 13, 2019 – Specimens sent to Washington State Department of Agriculture for identification. 69 traps with a total 309 specimens of sent for Egyptian cottonworm in sorghum, 52 traps with a total 689 specimens of sent for Egyptian cottonworm in wheat and 109 traps with a total of 14,030 specimens for old world bollworm in sorghum.

- November 25, 2019 – Four specimens from one trap sent Oregon Department of Agriculture for small brown planthopper.
- December 5, 2019 – Results from small brown planthopper were negative.
- December 10, 2019 – Results from specimens sent on November 13, 2019 were negative for targets.

Funding Amount	Funding Amount (KDA)	Total Number of Traps/Visuals	Cost Per Unit
Proposed = $37,336	Proposed = $590	Proposed = 414 traps, 138 visuals	Proposed= $73.64
Actual = $37,336	Actual = $590	Proposed = 414 traps, 138 visuals	Actual = 414 traps, 138 visuals

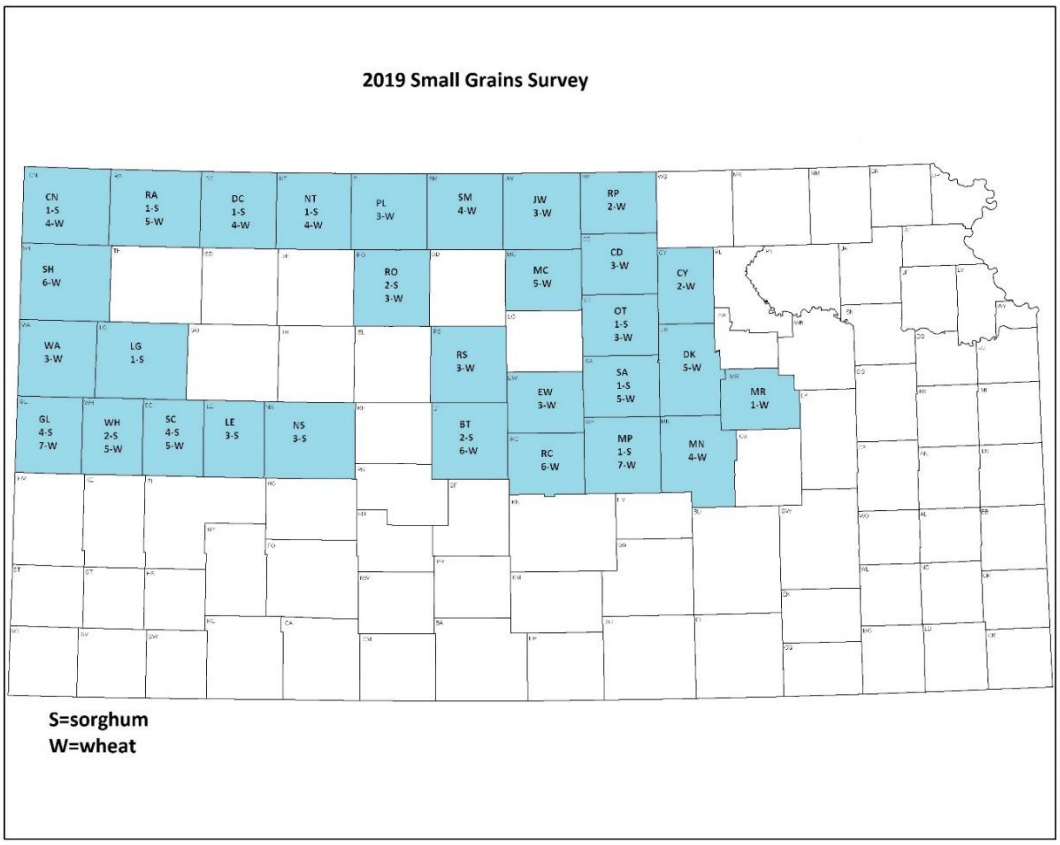
1. <u>Survey methodology (trapping protocol)</u>:

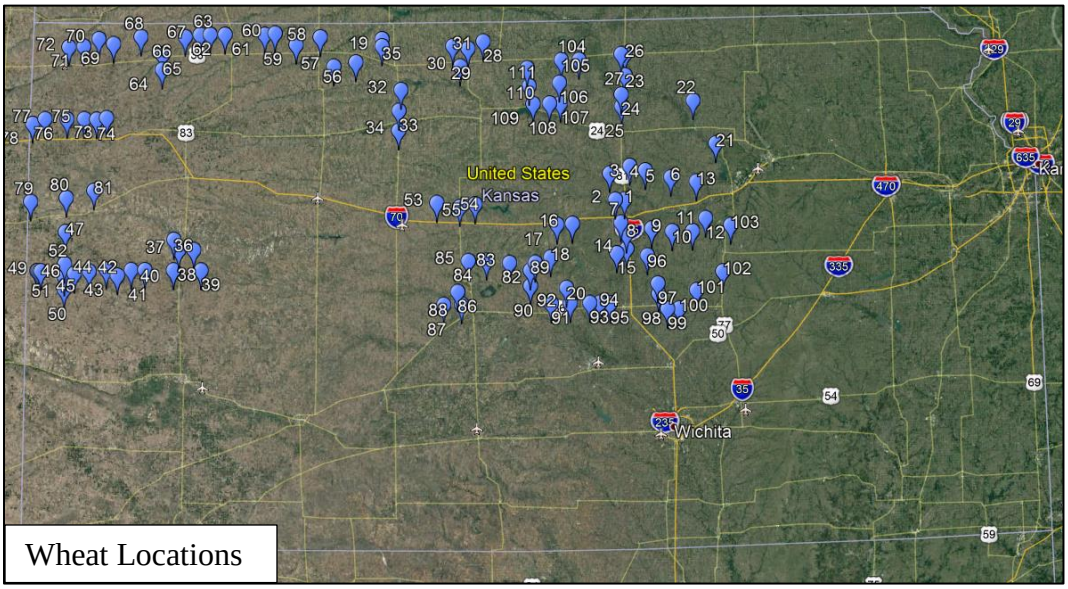
	Common Name	Scientific Name	Method	Method Detail	Lure
Pest:	Egyptian Cottonworm	*Spodoptera littoralis*	Trap	Plastic Bucket Trap	Spodoptera littoralis Lure
	Old World Bollworm	*Helicoverpa armigera*	Trap	Plastic Bucket Trap	Helicoverpa armigera Lure
	Small brown planthopper	*Laodelphax striatellus*	Trap	Sticky Card, Yellow	No Lure
	Sunn pest	*Eurygaster integriceps*	Visual	Visual	N/A

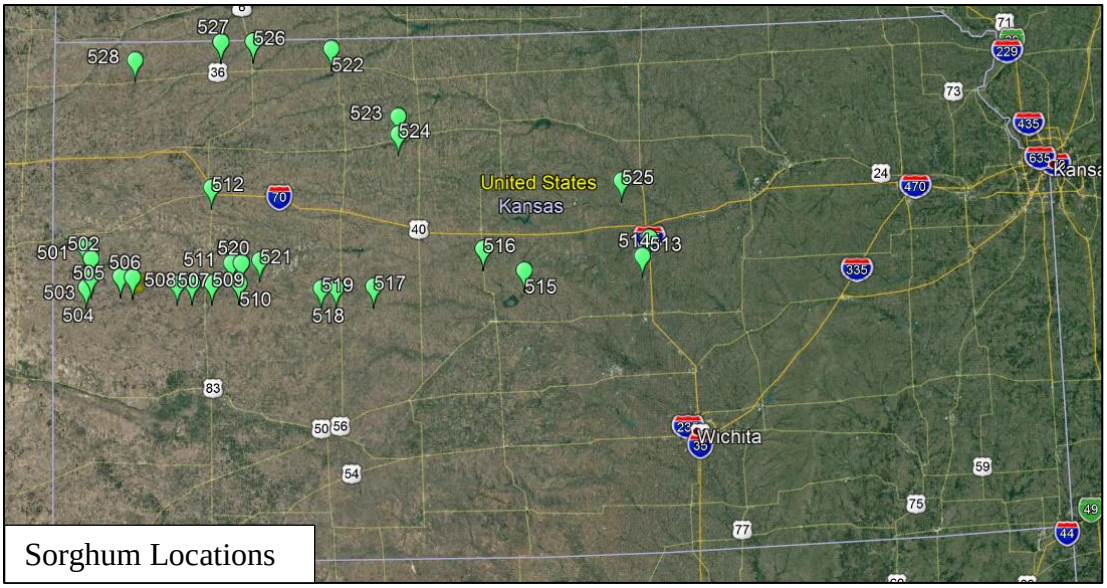
	Proposed	Actual
Sites (Locations):	138	110 wheat, 28 sorghum
Traps:	414	330 wheat, 84 sorghum
Visuals:	138	110 wheat, 28 sorghum

	Proposed	Actual
Number of Counties:	30	29
Counties:	Barton, Cheyenne, Clay, Cloud, Decatur, Dickinson, Ellsworth, Greeley, Jewell, Lane, Logan, Marion, McPherson, Mitchell, Morris, Ness, Norton, Ottawa, Phillips, Rawlins, Republic, Rice, Rooks, Russell, Saline, Scott, Sherman, Smith, Wallace, Wichita	Barton, Cheyenne, Clay, Cloud, Decatur, Dickinson, Ellsworth, Greeley, Jewell, Lane, Logan, Marion, McPherson, Mitchell, Ness, Norton, Ottawa, Phillips, Rawlins, Republic, Rice, Rooks, Russell, Saline, Scott, Sherman, Smith, Wallace, Wichita

County	Commodity	Planned Number of Fields	Actual Number of Fields
BARTON	SORGHUM	2	2
BARTON	WHEAT	6	6
CHEYENNE	SORGHUM	1	1
CHEYENNE	WHEAT	4	4
CLAY	WHEAT	2	2
CLOUD	WHEAT	3	3
DECATUR	SORGHUM	1	1
DECATUR	WHEAT	4	4
DICKINSON	WHEAT	5	5
ELLSWORTH	WHEAT	3	3
GREELEY	SORGHUM	4	4
GREELEY	WHEAT	7	7
JEWELL	WHEAT	3	3
LANE	SORGHUM	3	4
LOGAN	SORGHUM	1	1
MARION	WHEAT	4	4
MCPHERSON	SORGHUM	1	1
MCPHERSON	WHEAT	7	7
MITCHELL	WHEAT	5	5
MORRIS	WHEAT	1	0
NESS	SORGHUM	3	3
NORTON	SORGHUM	1	1
NORTON	WHEAT	3	3
OTTAWA	SORGHUM	1	1
OTTAWA	WHEAT	3	3
PHILLIPS	WHEAT	3	3
RAWLINS	SORGHUM	1	1
RAWLINS	WHEAT	5	5
REPUBLIC	WHEAT	2	2
RICE	WHEAT	6	6
ROOKS	SORGHUM	2	2
ROOKS	WHEAT	3	3
RUSSELL	WHEAT	3	3
SALINE	SORGHUM	1	1
SALINE	WHEAT	5	5
SCOTT	SORGHUM	3	3
SCOTT	WHEAT	5	5
SHERMAN	WHEAT	6	6
SMITH	WHEAT	4	4
WALLACE	WHEAT	3	3
WICHITA	SORGHUM	2	2
WICHITA	WHEAT	5	5
Total		**138**	**138**
Total Sorghum		**28**	**28**
Total Wheat		**110**	**110**


2019 Small Grains Survey
CN 1-S 4-W
RA 1-S 5-W
DC 1-S 4-W
NT 1-S 4-W
PL 3-W
SM 4-W
JW 3-W
RP 2-W
SH 6-W
RO 2-S 3-W
MC 5-W
CD 3-W
CY 2-W
OT 1-S 3-W
WA 3-W
LG 1-S
RS 3-W
DK 5-W
SA 1-S 5-W
EW 3-W
MR 1-W
GL 4-S 7-W
WH 2-S 5-W
SC 4-S 5-W
LE 3-S
NS 3-S
BT 2-S 6-W
RC 6-W
MP 1-S 7-W
MN 4-W
S=sorghum
W=wheat


United States
Kansas
Wichita
Wheat Locations



Sorghum Locations

2. Survey dates:

	Proposed	Actual
Survey Dates:	April 2019 – September 2019	March 25, 2019 – October 10, 2019
Wheat:	April 2019 – July 2019	March 25, 2019 – August 15, 2019
Sorghum:	June 2019 – September 2019	July 16, 2019 – October 10, 2019

Target Species	Survey Dates (Starting-Ending)	Number of Locations	Number of Traps, sweeps, samples taken	Number of Visits (Install, monitor, take down)	Total Number of Samples
Egyptian Cottonworm	April – July in wheat. Traps set June – September in sorghum	110 wheat, 28 sorghum	414 traps	3	552 possible
Old World Bollworm	April – July in wheat. Traps set June – September in sorghum	110 wheat, 28 sorghum	414 traps	3	552 possible
Small brown planthopper	April – July in wheat. Traps set June – September in sorghum	110 wheat, 28 sorghum	414 traps	3	552 possible
Sunn pest	April – July in wheat. Traps set June – September in sorghum	110 wheat, 28 sorghum	138 sweeps	6	552 possible
Totals		**138**	**89**	**15**	**2,208 possible**

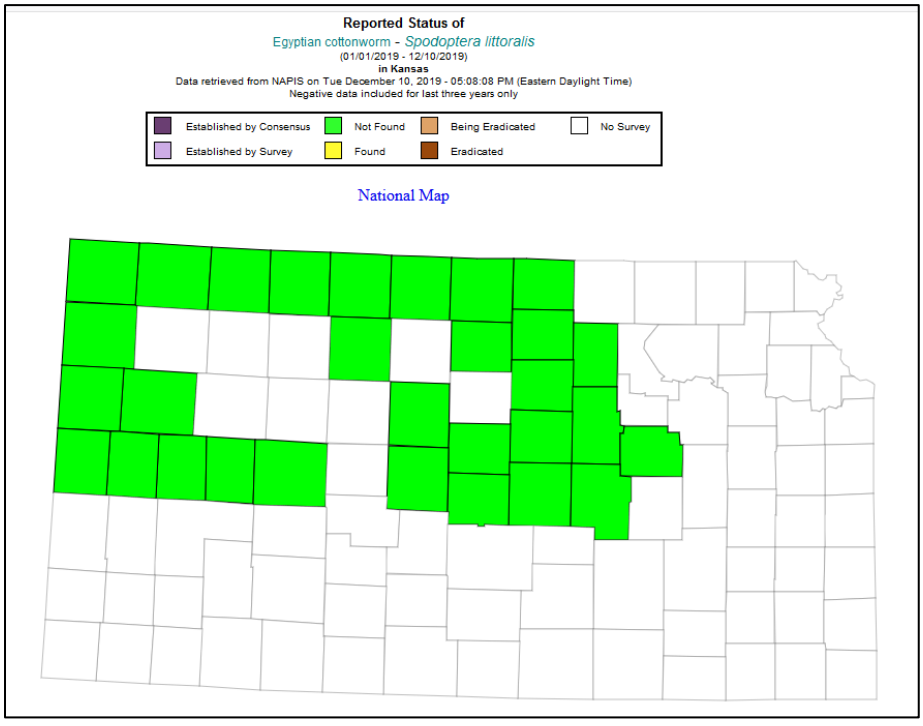
Target Species	Total Number of Traps or sweeps, sent in for identification	Total Number of Specimens sent in for identification
Egyptian Cottonworm	268 traps	1,022
Old World Bollworm	412 traps	43,689
Small brown planthopper	1 trap	4
Sunn pest	138 sweeps	0
Total	**819**	**45,534**

3. Benefits and results of survey:

	Positive	Negative	Total Number
Traps	0	414	414
Visual	0	138	138

4. Database submissions:

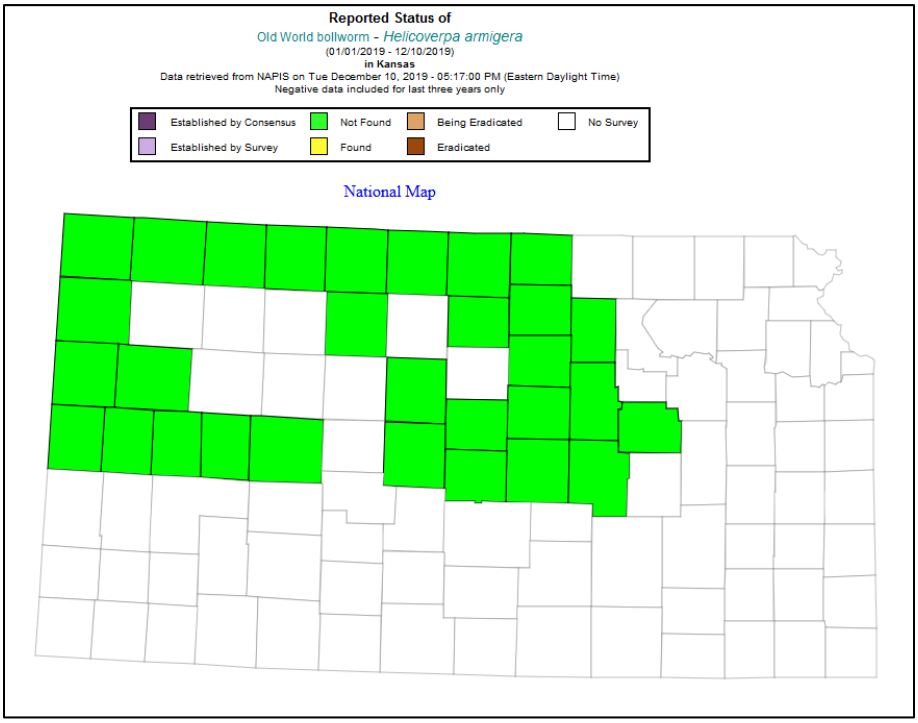
- Data submitted to NAPIS



Egyptian cottonworm ~ Spodoptera littoralis

State County	Trap	Lure	Positives	Negatives	Total
KS - Barton	Plastic Bucket Trap	Spodoptera littoralis Lure	0	8	8
KS - Cheyenne	Plastic Bucket Trap	Spodoptera littoralis Lure	0	5	5
KS - Clay	Plastic Bucket Trap	Spodoptera littoralis Lure	0	2	2
KS - Cloud	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Decatur	Plastic Bucket Trap	Spodoptera littoralis Lure	0	5	5
KS - Dickinson	Plastic Bucket Trap	Spodoptera littoralis Lure	0	5	5
KS - Ellsworth	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Greeley	Plastic Bucket Trap	Spodoptera littoralis Lure	0	11	11
KS - Jewell	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Lane	Plastic Bucket Trap	Spodoptera littoralis Lure	0	4	4
KS - Logan	Plastic Bucket Trap	Spodoptera littoralis Lure	0	1	1
KS - Marion	Plastic Bucket Trap	Spodoptera littoralis Lure	0	4	4
KS - McPherson	Plastic Bucket Trap	Spodoptera littoralis Lure	0	8	8
KS - Mitchell	Plastic Bucket Trap	Spodoptera littoralis Lure	0	5	5
KS - Morris	Plastic Bucket Trap	Spodoptera littoralis Lure	0	1	1
KS - Ness	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Norton	Plastic Bucket Trap	Spodoptera littoralis Lure	0	4	4
KS - Ottawa	Plastic Bucket Trap	Spodoptera littoralis Lure	0	4	4
KS - Phillips	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Rawlins	Plastic Bucket Trap	Spodoptera littoralis Lure	0	6	6
KS - Republic	Plastic Bucket Trap	Spodoptera littoralis Lure	0	2	2
KS - Rice	Plastic Bucket Trap	Spodoptera littoralis Lure	0	6	6

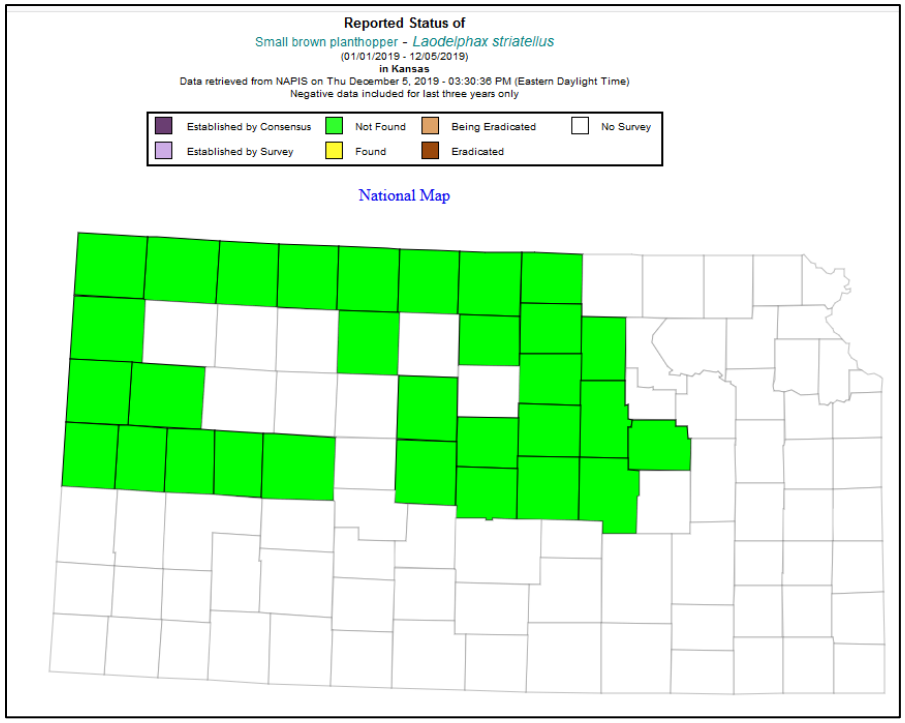
KS - Rooks	Plastic Bucket Trap	Spodoptera littoralis Lure	0	5	5
KS - Russell	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Saline	Plastic Bucket Trap	Spodoptera littoralis Lure	0	6	6
KS - Scott	Plastic Bucket Trap	Spodoptera littoralis Lure	0	8	8
KS - Sherman	Plastic Bucket Trap	Spodoptera littoralis Lure	0	6	6
KS - Smith	Plastic Bucket Trap	Spodoptera littoralis Lure	0	4	4
KS - Wallace	Plastic Bucket Trap	Spodoptera littoralis Lure	0	3	3
KS - Wichita	Plastic Bucket Trap	Spodoptera littoralis Lure	0	7	7
REPORT TOTAL			**0**	**138**	**138**



Old World bollworm ~ Helicoverpa armigera

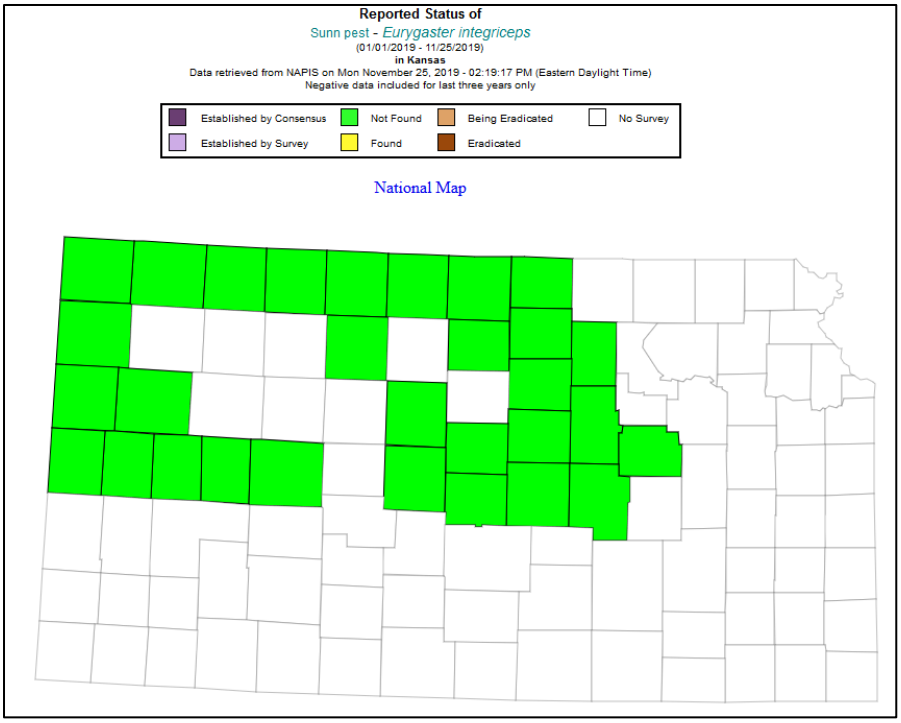
State County	Trap	Lure	Positives	Negatives	Total
KS - Barton	Plastic Bucket Trap	Helicoverpa armigera Lure	0	8	8
KS - Cheyenne	Plastic Bucket Trap	Helicoverpa armigera Lure	0	5	5
KS - Clay	Plastic Bucket Trap	Helicoverpa armigera Lure	0	2	2
KS - Cloud	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Decatur	Plastic Bucket Trap	Helicoverpa armigera Lure	0	5	5
KS - Dickinson	Plastic Bucket Trap	Helicoverpa armigera Lure	0	5	5
KS - Ellsworth	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Greeley	Plastic Bucket Trap	Helicoverpa armigera Lure	0	11	11
KS - Jewell	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Lane	Plastic Bucket Trap	Helicoverpa armigera Lure	0	4	4
KS - Logan	Plastic Bucket Trap	Helicoverpa armigera Lure	0	1	1
KS - Marion	Plastic Bucket Trap	Helicoverpa armigera Lure	0	4	4
KS - McPherson	Plastic Bucket Trap	Helicoverpa armigera Lure	0	8	8
KS - Mitchell	Plastic Bucket Trap	Helicoverpa armigera Lure	0	5	5
KS - Morris	Plastic Bucket Trap	Helicoverpa armigera Lure	0	1	1
KS - Ness	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Norton	Plastic Bucket Trap	Helicoverpa armigera Lure	0	4	4
KS - Ottawa	Plastic Bucket Trap	Helicoverpa armigera Lure	0	4	4
KS - Phillips	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Rawlins	Plastic Bucket Trap	Helicoverpa armigera Lure	0	6	6
KS - Republic	Plastic Bucket Trap	Helicoverpa armigera Lure	0	2	2
KS - Rice	Plastic Bucket Trap	Helicoverpa armigera Lure	0	6	6

KS - Rooks	Plastic Bucket Trap	Helicoverpa armigera Lure	0	5	5
KS - Russell	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Saline	Plastic Bucket Trap	Helicoverpa armigera Lure	0	6	6
KS - Scott	Plastic Bucket Trap	Helicoverpa armigera Lure	0	8	8
KS - Sherman	Plastic Bucket Trap	Helicoverpa armigera Lure	0	6	6
KS - Smith	Plastic Bucket Trap	Helicoverpa armigera Lure	0	4	4
KS - Wallace	Plastic Bucket Trap	Helicoverpa armigera Lure	0	3	3
KS - Wichita	Plastic Bucket Trap	Helicoverpa armigera Lure	0	7	7
REPORT TOTAL			**0**	**138**	**138**



Small brown planthopper ~ Laodelphax striatellus

State County	Trap	Positives	Negatives	Total
KS - Barton	Sticky Card, Yellow	0	8	8
KS - Cheyenne	Sticky Card, Yellow	0	5	5
KS - Clay	Sticky Card, Yellow	0	2	2
KS - Cloud	Sticky Card, Yellow	0	3	3
KS - Decatur	Sticky Card, Yellow	0	5	5
KS - Dickinson	Sticky Card, Yellow	0	5	5
KS - Ellsworth	Sticky Card, Yellow	0	3	3
KS - Greeley	Sticky Card, Yellow	0	11	11
KS - Jewell	Sticky Card, Yellow	0	3	3
KS - Lane	Sticky Card, Yellow	0	4	4
KS - Logan	Sticky Card, Yellow	0	1	1
KS - Marion	Sticky Card, Yellow	0	4	4
KS - McPherson	Sticky Card, Yellow	0	8	8
KS - Mitchell	Sticky Card, Yellow	0	5	5
KS - Morris	Sticky Card, Yellow	0	1	1
KS - Ness	Sticky Card, Yellow	0	3	3
KS - Norton	Sticky Card, Yellow	0	4	4
KS - Ottawa	Sticky Card, Yellow	0	4	4
KS - Phillips	Sticky Card, Yellow	0	3	3
KS - Rawlins	Sticky Card, Yellow	0	6	6
KS - Republic	Sticky Card, Yellow	0	2	2
KS - Rice	Sticky Card, Yellow	0	6	6
KS - Rooks	Sticky Card, Yellow	0	5	5
KS - Russell	Sticky Card, Yellow	0	3	3
KS - Saline	Sticky Card, Yellow	0	6	6
KS - Scott	Sticky Card, Yellow	0	8	8
KS - Sherman	Sticky Card, Yellow	0	6	6
KS - Smith	Sticky Card, Yellow	0	4	4
KS - Wallace	Sticky Card, Yellow	0	3	3
KS - Wichita	Sticky Card, Yellow	0	7	7
REPORT TOTAL		**0**	**138**	**138**



Sunn pest ~ Eurygaster integriceps

State County	Positives	Negatives	Total
KS - Barton	0	8	8
KS - Cheyenne	0	5	5
KS - Clay	0	2	2
KS - Cloud	0	3	3
KS - Decatur	0	5	5
KS - Dickinson	0	5	5
KS - Ellsworth	0	3	3
KS - Greeley	0	11	11
KS - Jewell	0	3	3
KS - Lane	0	4	4
KS - Logan	0	1	1
KS - Marion	0	4	4
KS - McPherson	0	8	8
KS - Mitchell	0	5	5
KS - Morris	0	1	1
KS - Ness	0	3	3
KS - Norton	0	4	4
KS - Ottawa	0	4	4
KS - Phillips	0	3	3
KS - Rawlins	0	6	6
KS - Republic	0	2	2
KS - Rice	0	6	6

KS - Rooks	0	5	5
KS - Russell	0	3	3
KS - Saline	0	6	6
KS - Scott	0	8	8
KS - Sherman	0	6	6
KS - Smith	0	4	4
KS - Wallace	0	3	3
KS - Wichita	0	7	7
REPORT TOTAL	**0**	**138**	**138**

B. If appropriate, explain why objectives were not met. *

- One extra trap for sorghum set in Lane.
- No traps for sorghum set in Morris. Unable to find a sorghum field.
- Started surveying in sorghum in July instead of June because of late planting season.

C. Where appropriate, explain any cost overruns or unobligated funds in excess of $1,000. *

**indicates information is required per 7 CFR 3016.40 and 7 CFR 3019.51*

Approved and signed by

_____ Date: _____
Cooperator

_____ Date: _____
ADODR